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1. A semiconductor device, comprising:

a portion to be measured by fluctuation in potential;

a wire having one end and the other end connected with said portion to be measured; and

an observation part connected with said one end of said wire,

wherein said observation part includes a pn junction irradiated with a laser beam to detect said fluctuation in potential, and

said pn junction includes a first impurity region of a first conductivity type connected with said one end of said wire and a second impurity region of a second conductivity type.

- 2. The semiconductor device according to claim 1, wherein said first impurity region is formed within said second impurity region.
- 3. The semiconductor device according to claim 2, wherein said observation part includes a first MOS transistor having said first impurity region as a source/drain region.

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4. The semiconductor device according to claim 3, wherein said first MOS transistor includes a gate electrode set to be the same in potential as said second impurity region.

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5. The semiconductor device according to claim 3 further comprising a second

MOS transistor including said portion to be measured,

wherein said first MOS transistor and said second MOS transistor are arranged in a same gate array.

6. The semiconductor device according to claim 5, wherein said portion to be measured is a gate electrode of said second MOS transistor.

- 7. The semiconductor device according to claim 5, wherein said portion to be measured is a source/drain region of said second MOS transistor.
- 8. The semiconductor device according to claim 5, wherein said portion to be measured is a well region of said second MOS transistor.
- 9. The semiconductor device according to claim 1, further comprising a wire tobe measured including said portion to be measured.
  - 10. The semiconductor device according to claim 9, wherein said observation part includes:
  - a third impurity region connected with a second portion to be measured different from said portion to be measured and made conductive with said wire to be measured; and
    - a fourth impurity region having a conductivity type opposite to a conductivity type of said third impurity region.

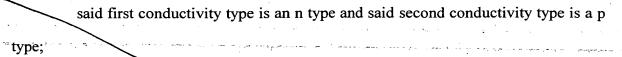
11. The semiconductor device according to claim 1, wherein

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said observation part further includes a second pn junction having a p-type third impurity region connected with said wire and an n-type fourth impurity region; and

- a first fixed potential is applied to said second impurity region and a second fixed potential higher than said first fixed potential is applied to said fourth impurity region.
- 12. A method of analyzing the semiconductor device recited in claim 1, comprising the steps of:
  - (a) irradiating said pn junction with a laser beam; and
  - (b) measuring light intensity of said laser beam reflected at said pn junction.
- 13. A method of analyzing the semiconductor device recited in claim 2,15 comprising the steps of:
  - (a) irradiating said pn junction with a laser beam; and
  - (b) measuring light intensity of said laser beam reflected at said pn junction.
- 14. A method of analyzing the semiconductor device recited in claim 3, 20 comprising the steps of:
  - (a) irradiating said pn junction with a laser beam; and
  - (b) measuring light intensity of said laser beam reflected at said pn junction.
- 15. A method of analyzing the semiconductor device recited in claim 4, comprising the steps of:

- (a) irradiating said pn junction with a laser beam; and
- (b) measuring light-intensity of said laser beam reflected at said pn junction.
- 16. A method of analyzing the semiconductor device recited in claim 5, 5 comprising the steps of:
  - (a) irradiating said pn junction with a laser beam; and
  - (b) measuring light intensity of said laser beam reflected at said pn junction.
  - 17. A method of analyzing the semiconductor device recited in claim 6, comprising the steps of:
    - (a) irradiating said pn junction with a laser beam; and
    - (b) measuring light intensity of said laser beam reflected at said pn junction.
- 18. A method of analyzing the semiconductor device recited in claim 7, comprising the steps of:
  - (a) irradiating said pn junction with a laser beam; and
  - (b) measuring light intensity of said laser beam reflected at said pn junction.
- 19. A method of analyzing the semiconductor device recited in claim 8,20 comprising the steps of:
  - (a) irradiating said pn junction with a laser beam; and
  - (b) measuring light intensity of said laser beam reflected at said pn junction.
- 20. A method of analyzing the semiconductor device3 recited in claim 9, comprising the steps of:

- (a) irradiating said pn junction with a laser beam; and
- (b) measuring light intensity of said laser beam reflected at said pn junction.

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